SHIPS' SAFETY BULLETIN

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OCTOBER - DECEMBER 2003

Suggested routing should include CO, XO, department heads, division officers, CMC, CPO mess, petty officers' lounge, work-center supervisors, and crew's mess.
Blanks provided for initials following review:

_____ _____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____ _____

First Surface Ship Safety Seminar Held

By ETC(SW) Henry DuPlantier
Naval Safety Center

The Naval Safety Center and the Board of Inspection and Survey (InSurv) conducted a cooperative and first-ever surface ship safety seminar in August. Thirty-one commands participated, represented by everyone from department heads to division officers.

The seminar addressed recurring fleet discrepancies identified during both Naval Safety Center surveys and InSurv inspections. Driven by the Naval Safety Center and InSurv, the seminar addressed safety and other topics, including a Human System Integration (HSI) briefing by a Naval Sea Systems Command representative from Whitney, Bradley and Brown, Inc.

The Naval Safety Center and InSurv do not compare their individual inspection and survey results; however, the two regularly exchange general information about what each command checks during its visit. The Naval Safety Center primarily observes safety and training requirements and, therefore, offers commands visited more of a static appraisal. On the other hand, InSurv performs hot and cold equipment safety checks and observes actual operating procedures. Nonetheless, each of the two (the Naval Safety Center and InSurv), frequently identifies similar discrepancies—a fact highlighted during the seminar.

Fleet units should understand a Naval Safety Center survey is a “free look” and usually is scheduled from a year to a few months before the InSurv visit. It might seem unreasonable for InSurv to identify the same discrepancies found during a Naval Safety Center survey. However, safety survey results are given only to the commanding officer, who then will direct appropriate action to resolve the discrepancy. InSurv results are handled differently.

Briefs presented during the safety seminar are available on the Naval Safety Center’s website at http://www.safetycenter.navy.mil, under "Afloat Safety." Each PowerPoint brief outlines common Naval Safety Center and InSurv discrepancies found during their independent ship visits. Pay particular attention to each slide’s "Notes" section, since it adds data about each discrepancy.

COMMANDER, NAVAL SAFETY CENTER, 375 A St. NORFOLK, VA 23511-4399

The Naval Safety Center will visit fleet concentration areas to brief this presentation and visited San Diego in early November.

The Naval Safety Center sent messages to commands that participated in the seminars asking for feedback: Was the information useful? Did we miss anything? How can we improve this seminar?

E-mail us and let us know what you think. Send your feedback via e-mail to:

safe-afloat@navy.mil

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Here Are Some Tips for Traffic Safety Coordinators

By LCdr Frank Bulges
Naval Safety Center

How many motorcycle riders do you have on board?

Have they all been to the motorcycle rider safety course?

As the command's traffic safety coordinator, you should be able to answer these questions. One common motorcycle safety misunderstanding is, "I do not ride on base, so I do not need the course." WRONG!

Para 2a(2) of enclosure (1) to OpNavInst 5100.12G, *Navy Traffic Safety Program* states, "Every operator of a government-owned motorcycle, every military operator of a motorcycle whether **ON** or **OFF** *[a naval]* installation, and every civilian operator of a motorcycle on a naval installation must successfully complete COMNAVSAFECEN-approved motorcycle training." This section of the safety manual also, "Encourages all motorcycle operators to complete a refresher course before each riding season and after long periods of inactivity."

You cannot schedule motorcycle-rider safety course training effectively if you do not know who in the command owns or rides motorcycles. I urge you to pass the word about these requirements through your Plan-of-the-Day. Then, survey the crew to determine which motorcycle operators haven't taken the course. Another useful tool is to include the requirements as part of your command's welcome-aboard brief.

Another misunderstood requirement of motorcycle safety is the use of personal protective equipment (PPE). Enclosure (1) of OpNavInst 5100.12G also lists motorcycle PPE requirements, stating, "The following personal protective equipment is mandatory for all persons described in paragraph 5a [Navy military always, Navy civilians on duty, anyone on naval installations] of this instruction while operating or riding as a passenger on a motorcycle:"

- "A properly fastened (under the chin) protective helmet certified to meet U.S. Department of Transportation (DOT) standards. If the host nation does not have an equivalent helmet standard, the helmet will meet the U.S. DOT standard. Fake or novelty helmets are prohibited.
- "Properly worn eye protective devices (impact or shatter resistant goggles or full-face shield properly attached to the helmet). A windshield, fairing or eyeglasses alone are not proper eye protection.
- "Properly worn long-sleeved shirt or jacket, long-legged trousers and full-fingered gloves or mittens designed for use on a motorcycle.
- "Sturdy footwear is mandatory. Leather boots or over-the-ankle shoes are strongly encouraged.
- "A brightly colored outer upper garment during the day and a reflective upper garment during the night. The outer upper garment shall be clearly visible

and not covered. Military uniforms do not meet these criteria.

- "PPE for operators of government-owned motorcycles, ATVs [all terrain vehicles] and OHMs [off highway motorcycles] during off-road operations shall also include knee and shin guards and padded full-fingered gloves."

All active duty personnel--whether in Maine or in California--are required to use Navy-mandated PPE at all times despite lesser requirements of individual state helmet laws. The traffic safety coordinator should check to see if current state laws are more stringent than base or regional instructions. For example, COMNAVREGMIDLANT/SOPA(ADMIN)HR INST 1020.1 of Aug. 26, 2002, states, "All Navy and Marine Corps personnel are required to wear safety helmets with full face shield attached while riding two- or three-wheeled motor vehicles on base." This requirement is more stringent than OPNAVINST 5100.12G.

The better we educate our Sailors about these requirements, the better our odds for greatly reducing mishaps and making the overall Navy motorcycle safety program more effective.

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Quarterdeck Heaters

By EMC(SW) Manuel Carretero
Naval Safety Center

With winter here and its accompanying chill, many pier-side ships want to use electric quarterdeck heaters to make open-quarterdeck watch standing more bearable. In 1990, Naval Sea Systems Command authorized two different electric heaters aboard ships. Unfortunately, both models have been discontinued. Commander, Carderock Division, Naval Surface Warfare Center letter 9512 Ser 9213/176 of 11 Sep 03 recommends the Chromalox Model STAR-06-43-P commercial portable radiant heater for shipboard use.

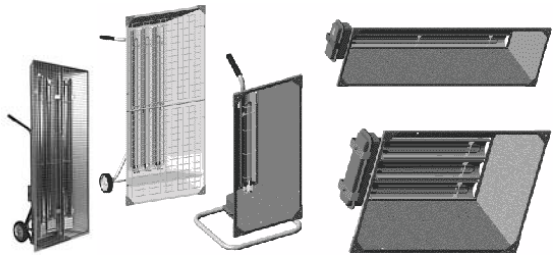
The CCI model OKP063 replaced the Wellman model RP-3438. However, the CCI model is not suitable for shipboard use. The heater is not double insulated and requires a ground.

The Chromalox model STAR-06-43-P replaced the RBC-6-4NC. The Chromalox heater provides six kilowatts (20,472 BTUs) of heat, and can use the ship's 440VAC, three-phase receptacle. To connect these heaters to a ship's electrical system, however, you need the following parts:

Name	Part Number	NSN
Elect. Plug	SYM 717.1	5935-00-935-2235
Elect. Cable	LSFHOF-9	0145-01-202-0673
Elect. Cable	FHOF-9	6145-00-761-2878
Receptacle	SYM-915.1	5999-00-879-1519

If you don't have a 440-volt receptacle near your quarterdeck, submit an alteration request (AER) to your TYCOM to get permission to install one.

To buy the approved heater, you must contact the manufacturer or a representative. The website for Chromalox is:
http://www.chromalox.com
and a few sales offices are listed. Here is a list of some Chromalox offices and their phone numbers. Also shown below are some examples of the approved heaters:



Location	Phone #
Los Angeles, CA	(714) 953-2450
San Francisco, CA	(800) 774-5630
Seattle, Wash.	(800) 634-5573

Florida area	(800) 666-7706
Georgia area	(770) 368-0030
North Carolina area	(704) 841-8727
Richmond, Va.	(804) 755-6007
Connecticut area	(860) 347-4655
Rhode Island area	(401) 751-5508
Main office	(800) 443-2640

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(See Enclosure for further details)

Do You Have an Emergency Asbestos Response Team?

By LCdr Walter Banks
Naval Safety Center

Does your ship have an emergency asbestos response team (EART), and does it comply with OpNavInst 5100.19D? Did you know that if your ship was built before 1980, you must have a fully-trained EART? Do you know how to set up the team and what schools and certifications each person must complete before becoming a team member? Do you know what shipboard department should manage this team? Did you know there is a specific protocol dealing with asbestos handling in an emergency?

If you cannot answer yes to all these questions, your program probably is not functional. This is one of many safety programs needing to be closely monitored because of the serious health effects of asbestos exposure.

A ship's engineering or repair department is responsible for identifying and submitting to the ship's medical department a list identifying those crew members involved in EART asbestos operations. This list will be for consideration for entry into the Asbestos Medical Surveillance Program (AMSP), as outlined in paragraph B0108b(2)(c) of OpNavInst 5100.19D.

Minimally, the EART should include a supervisor, a cutter, and a cleaner as indicated in paragraph B0108a and in Appendix B1-C OpNavInst of 5100.19D. The instruction also mandates that all team members be graduates of the emergency asbestos response course (CIN: A-760-2166), and the training is documented in the member's service record. The engineering or repair department also is responsible for making sure the response kit is inventoried and all required items on allowance equipage list AEL 2-330024045 are on hand. Naval Safety Center surveyors and InSurv inspectors will assess your program for compliance, so check your program before an assist or inspection team arrives!

Paragraph B0108 of OpNavInst 5100.19D outlines the strict protocol for emergency repair or replacement of asbestos-containing material. The EART can perform only small-scale, short-duration repairs or maintenance actions after a pre-work brief, followed by a work-release inspection.

The bottom line: If you are not 100 percent sure your ship is asbestos-free, then you should have an intact, functional EART program. For Sailors serving aboard ships whose keels were laid before 1980, I guarantee you there is asbestos on your ship.

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Shorting Probes Are Coming Up Short

By EMC(SW) Robert Hill
Naval Safety Center

Naval Safety Center surveyors have found two recurring discrepancies fleet-wide when examining shorting probes used in electrical and electronic spaces.

One discrepancy involves the alligator clips on the shorting probes: They must be mechanically secured and soldered in place to prevent the screw from backing out. Soldering them also results in electrical continuity when you use the probe to discharge components to ground. Warning: **Make sure you don't have a "cold solder" joint.**

The second discrepancy involves the threads in the shorting probe at the end of the handle. Make sure this end has a nylon screw installed and the screw is cut off flush with handle's end. This prevents the erroneous installation of the shorting hook to the non-grounding end of the probe.

You are responsible for meeting configuration requirements by making sure new shorting probes are modified as described above. Use MIP 3000/001 series as the guide for shorting probe configuration requirements. You also must inspect your shorting probes to make sure they comply with the MRC S-6 of MIP 3000/001 series.

Finally, always remember: **Don't use a probe to ground voltages that exceed its maximum safe rating.**

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Here's the Truth About Explosion-proof Lighting

By LCdr Walter Banks
Naval Safety Center

Let's clarify what you always wanted to know about explosion-proof lighting but were afraid to ask.

For many years we have either neglected or performed marginal PMS on this lighting, which is installed for the entire ship's safety. Ninety-five percent of explosion-proof lighting Naval Safety Center surveyors examined during ship visits over the past two years are unsatisfactory.

Fact: A major contributor to this dismal record was that 51 percent of the ships were not carrying MIR 3301/008 for explosion-proof lighting.

Fact: The remaining 49 percent had ownership problems in that lighting maintenance and care was not specifically and properly assigned. These ships had the MIP, but were not completing required S-1 and 18M-1R MRCs.

Most ships didn't know where their explosion-proof lighting was located: The location should be documented on an equipment guide list so maintainers know each light's location.

Paragraph C2304q in OpNavInst 5100.19D requires that you operate only explosion-proof electrical equipment in a potentially explosive environment. The instruction also addresses maintaining hazmat stowage area explosion-proof electrical fixtures in the proper material condition.

Paragraph 330-1.9.2.8.1 of NSTM 330 (Rev. 2), Lighting, states that explosion-proof lighting fixtures are installed on elevators subject to explosive liquids or vapors. Symbols 73.3, 77.4, and 331.1 illustrate approved lighting for elevator trunks not required to have explosion-proof lighting.

Meanwhile, pages 232 and 233 of DoD handbook 289(SH) dated Nov. 26, 1989, list the groups of atmospheres and chemical stowage areas where explosion-proof lighting must be installed.

Table 1 of GSO 300 S9AA0-AB-GOS-010, *General Requirements for Electric Plant,* recommends explosion-proof group D lighting for potentially explosive atmospheres.

Paragraph 300-4.2.3 of NSTM 300 (Rev. 5), *Electric Plant-General*, discusses explosion-proof lighting requirements and where the lights normally are found aboard ships.

To sum it up, you have been provided references and requirements for installing and maintaining explosion-proof lighting according to MIP 3301/008. Ask yourself, "Why is my explosion-proof lighting unsat?" Maybe you're not adhering to the MRC's step-by-step procedures, or maybe you're not using the correct part and stock numbers. The note section of Figure 1 of the S-1 maintenance requirement card lists the NSNs for all the parts.

Where should you find explosion-proof lighting aboard ship? Good question: They are in areas where you find high concentrations of explosive vapors. These include flammable stowage lockers, CHT pump rooms, hazmat storerooms, paint lockers, weapons handling areas, and gas turbine intakes. Do not confuse explosion-proof lighting with standard shipboard exterior lighting because those lights serve different purposes and differ in construction.

For further information about maintaining explosion-proof lighting, review the references noted in this article.

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Here's a Lifejacket Update

By LCdr Frank Bulges
Naval Safety Center

More Stearns-brand lifejackets are entering the fleet and replacing older Mk-1 models that slowly are being phased out. Specifically, the Stearns Mk-1 (Stearns 1440 series); the abandon-ship life vest with pouch (Stearns model 1375); the Mustang models (MD3020NV and MD3025NV); and the inherently buoyant Stearns Merchant Mate II vest are becoming increasingly common.

To make sure this life-saving gear is correctly maintained, FR 2-03 added new maintenance index pages (MIPs) for each of the new vests.

The new MIPs for Stearns life vests are:

- The Stearns MK-1 (1440 series) is covered under MIP 5832/014 of June 2003).
- The abandon-ship jacket (Stearns model 1375) is covered under MIP 5832/016 dated June 2003.
- The Stearns inherently buoyant jacket (Stearns Merchant Mate II) is covered under MIP 5832/015 dated January 2003.

Make sure your work center adds these new MIPs for Stearns life jackets. Your 3M coordinator can help you get them.

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Procedures, Procedures, Procedures!

By MM1 (SW) Karlus Smith
Naval Safety Center

We have procedures for every daily task or evolution. From cooking, cleaning, or driving, to Navy work like aligning a system for operation, someone has taken the time to outline requirements so we can complete these activities safely. For instance, a recipe enables you to prepare your favorite meal. Lessons teach you how to drive.

The Navy—like any other dangerous profession has procedures outlining operating requirements.

From technical manuals to a Navy-wide or a ship-generated standard operating procedure (SOP), there are procedures to follow! A salty shipmate might ask, "Why do I have to read this book about how to start this pump? I've done this a million times!"

Here's why: It takes just one mistake or deviation from a required procedure to cause a mishap.

The Naval Safety Center regularly receives messages about Sailors who either did not follow procedures or followed them incorrectly, resulting in equipment damage or personal injury.

The following is an example of how adhering to procedure would have saved money, frustration and unnecessary work:

An engineman was aligning potable water from shore to ship; a task ship's personnel perform daily. There are right and wrong ways to do this. The right way includes having guidelines in writing, while the wrong means doing it by what you think you know.

Permission had been granted to align fresh water to the ship, and the potable water pump was secured. The EN2 began to align valves in the shaft alley and prepared to open the supply riser valve on the quarterdeck. He didn't go into the forward pump room to verify forward potable-water alignment. An established shipboard operating procedure would have told him to do so.

He went to the quarterdeck and opened the supply riser valve. Because the supply valve to the forward potable water tanks was closed, the forward pump room's fill-and-transfer headers inadvertently pressurized because of incorrect valve alignment. The upstream relief valve lifted in the forward pump room and flooded the space with six feet of water. All pump-room pumps were underwater, causing an estimated $8,000 damage. It could have been much more.

Fortunately, another Sailor happened to check in the pump room for proper operation of another piece of equipment and discovered the flooding. The subsequent investigation found there was no procedure for this operation.

If you, as an operator, cannot find written guidance for a particular evolution, inform your chain of command—this is an operational risk management (ORM) requirement.

Several shipboard resources offer information on particular procedures. Start by checking your Ship's Information Booklet. Another source is the Naval Sea Systems Command website at http://nvss1web.navsses.navy.mil. If you still can't find guidance for a particular procedure, refer to the Naval Ships' Technical Manuals (NSTM). A ship can use an NSTM to create and implement its own written procedures based on general shipboard requirements.

Establishing a needed procedure inevitably will save time, money and lives.

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Are Shackles Manufactured in China Authorized?

By LCdr Frank Bulges
Naval Safety Center

Within the past several months, we have been asked, "Are we authorized to use shackles manufactured in …?" Paragraph 572-3.2.5 of NSTM 572, *Shipboard Stores and Provision Handling,* spells out the requirements for shipboard shackles.

All shackles used in the Navy must have (in raised or stamped lettering) the manufacture's name or trademark, the shackle size and its working load limit. Without these required markings, there is no proof the shackle meets load requirements, thus it you can't use it.

Submit a Quality Deficiency Report (QDR) for shackles received from the supply system that do not meet these marking requirements. If they meet the requirements, use them.

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Welding Curtains: Do You comply?

By LCdr Walter Banks
Naval Safety Center

Welding curtains are required in all welding shops and work areas where stick welding, MIG welding, TIG welding, and any form of infrared or ultraviolet rays can affect eyesight. The reference is military specification MIL-C-24576(SH) dated July 27, 1987.

Welding curtains are not manufactured en masse: They must be custom fabricated to fit your specific work area. To determine how to make your curtains, you must:

- Determine the curtain's length and width so it effectively blocks the infrared, ultraviolet, and visible rays that welding generates. The welders' curtain also should be one to two feet larger than the area for which it is being fabricated.
- Include a two-inch hem on all four sides to keep the curtain from fraying.
- Use half-inch-diameter grommets, positioned six inches apart (end-to-end at the curtain's top) to hang and support its weight. Begin installing the grommets two inches from the top edge of the welders' curtain.
- Ship's force or your applicable repair activity will be required to make the curtain rod and hooks that will encircle the welding area and support the welding curtain itself. Make sure the rods are durable and strong enough to support your curtain's weight.

When ordering welding curtains, specify they must be made only of authorized black-pigmented UC-100-96HS (Refrasil cloth). This material meets the Naval Sea System Command requirements. Black-pigmented material is the only color authorized for shipboard welding curtains.

Contact the following manufacturers for assistance:

Mid-Mountain Materials
7600 Fifth Ave South
Seattle, Wash. 98108
(206) 762-7600

GASPRO, Ltd.
2305 Kamehame Highway
Honolulu, Hawaii 9619
(808) 842-2131

C.E. Thurston & Sons
4850 Brookside Court
Norfolk, Va. 23501
(757) 855-7700

Chambelin Rubber Co.
Townline Road
Rochester, N.Y. 14920
(716) 427-7780 or 427-7786 ext. 20

If you have unauthorized curtains, identify the deficiency on your CSMP and have the correct curtains manufactured as soon as possible.

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Q. Where can I find information about enrolling in a motorcycle vehicle safety course?

A. Contact your base safety office for information on local courses being offered.

DEPARTMENT OF THE NAVY
NAVAL SURFACE WARFARE CENTER
CARDEROCK DIVISION

NAVAL SHIP SYSTEMS
ENGINEERING STATION
5001 S BROAD STREET
PHILADELPHIA, PA 19112-1403

IN REPLY REFER TO

9512
Ser 9213/176
11 Sep 2003

From: Commander, Carderock Division, Naval Surface Warfare Center
Philadelphia, PA 19112-1403
To: Commander Naval Air Force, U.S. Atlantic Fleet
Commander Naval Air Force, U.S. Pacific Fleet
Commander Naval Surface Force, U.S. Atlantic Fleet
Commander Naval Surface Force, U.S. Pacific Fleet

Subj: PORTABLE ELECTRIC HEATERS FOR USE ON QUARTERDECK - REVISED RECOMMENDATION FOR

Ref: (a) NAVSEA ltr 9510 Ser 56Y11/397 of 7 Oct 1988
(b) PHONCON NAVSEA (Code 05Z91) P. Ospina/NSWCCD-SSES (Code 9213) W. Sorg of 28 Aug 2003
(c) PHONCON NAVSAFCEN (Code 341EL) M. Carretero/NSWCCD-SSES (Code 9213) W. Sorg of 3 Sep 2003

Encl: (1) List of Chromalox Factory Representatives

1. Reference (a) recommended the use of two different electric radiant heaters for use on quarterdecks aboard ship: The Wellman Model RP-3438 and the Chromalox Model RBC-6-4NC. These two models have both been discontinued.

2. The new commercial portable electric radiant heater CCI Model OKP063 that replaced the Wellman Model RP-3438 is not suitable for shipboard use. This model is not double insulated and does not require a ground.

3. The commercial portable electric radiant heater Chromalox Model STAR-06-43-P that replaced the Chromalox Model RBC-6-4NC is a suitable replacement and is recommended. Manufacturer representatives are listed in enclosure (1). The new Chromalox model provides six kilowatts (20,472 BTU/hr) of heat and can use ship's 440VAC, three-phase receptacle.

4. This heater is acceptable for temporary use on "open" quarterdecks to provide personal comfort during in-port cold weather conditions. Ship's force must comply with manufacturers' recommended safety precautions regarding heater location in relation to combustible materials.

Subj: PORTABLE ELECTRIC HEATERS FOR USE ON QUARTERDECK - REVISED RECOMMENDATION FOR

5. To connect these new model heaters to a ship's electrical system, the following parts are required:

NAME	SYMBOL or PART NUMBER	NSN
Electrical plug	SYM 717.1	5935-00-935-2235
Electrical Cable (Interior spaces only)	LSFHOF-9	0145-01-202-0673
Electrical Cable (Exterior Spaces)	FHOF-9	6145-00-761-2878
Receptacle (if not installed)	SYM-915.1	5999-00-879-1519 (APL 999970683)

6. NAVSEA 05Z91 concurs per reference (b) and NAVSAFCEN 341EL concurs per reference (c).

7. The technical point of contact for this correspondence is Carderock Division, Naval Surface Warfare Center (NSWCDCD-SSES) Code 9213, Mr. William Sorg: Commercial 215-897-7215, DSN: 443-7215, email sorgw@nswccd.navy.mil.

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By Direction

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NAVSEA, (Codes 05Z, 05Z4,05Z9)
ADUSN (S&S) Washington DC
NSWCC-SSES Codes 92/92S/921, 9213(2), 9344

LIST OF CHROMALOX FACTORY REPRESENTATIVES

The website for Chromalox is: www.chromalox.com

Name	Location	**Phone Number**
Chromalox Factory Representative	Los Angeles Area	(714) 953-2450
Chromalox Factory Representative	San Francisco Area	(800) 774-5630
Chromalox Factory Representative	Seattle, WA Area	(800) 634-5573
		(425) 885-0372
Chromalox Factory Representative	Florida, Area	(800) 666-7706
		(727) 726-8334
Chromalox Factory Representative	Georgia Area	(770) 368-0030
Chromalox Factory Representative	North Carolina Area	(704) 841-8727
Chromalox Factory Representative	Richmond, Va. Area	(804) 755-6007
Chromalox Factory Representative	Connecticut Area	(860) 347-4655
Chromalox Factory Representative	Rhode Island Area	(401) 751-5508
Chromalox Precision Heat & Control	Main Office	(800) 443-2640
		(412) 967-3800

Enclosure (1)